# Laravel Challenge

## Background

You are building a simplified **Order Management API** for a logistics platform that serves multiple clients (tenants).
 Each client should be able to create and retrieve their own orders, each containing one or more items.
 When an order is created, the system must **trigger an asynchronous process** that generates a simulated invoice in the background.

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## Scope of Work

### 3.1 Core Features

| Feature | Description | Requirements |
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| **Client Management** | Represent clients as separate tenants. | - Model: Client (id, name, email).<br>- Use client_id in the orders table to identify ownership. |
| **Order Creation** | Allow a client to create an order containing one or more items. | - Endpoint: POST /api/orders.<br>- Input validated through **FormRequest**.<br>- Business logic handled in a **Service or Repository layer**, not directly in controller. |
| **Order Retrieval** | Retrieve a single order and its items. | - Endpoint: GET /api/orders/{id}. |
| **Client Order Listing** | Retrieve all orders from a specific client. | - Endpoint: GET /api/clients/{id}/orders. |
| **Asynchronous Invoice Generation** | When an order is created, trigger a background job that simulates invoice generation. | - Dispatch a **Queue Job** (e.g., GenerateInvoiceJob).<br>- The job logs or stores an "invoice created" message.<br>- Use database or Redis queue driver. |

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| **Authentication** | Basic protection of endpoints. | - Use **Laravel Sanctum** or **JWT**.<br>- At minimum, authentication middleware required for POST requests. |
| **Testing** | Demonstrate testability and understanding of Laravel testing. | |

# Technical Specifications

| Element | Details |
|---|---|
| **Framework** | Laravel 10 or 11 |
| **Database** | MySQL |
| **Queue Driver** | Database or Redis |
| **Tools** | Artisan commands for migration, seeding, and queue worker |
| **Environment Setup** | .env.example file with all required variables |
| **Deliverables** | GitHub repository with source code and instructions |
| **Expected Duration** | 6–8 hours total work |
| Delivery | Before Wednesday October 22th |